



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,332	09/30/2003	Atsushi Sugasaki	Q77298	2251

23373 7590 06/29/2006
SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

LEE, SIN J

ART UNIT PAPER NUMBER

1752

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/673,332	Applicant(s) SUGASAKI ET AL.	
	Examiner Sin J. Lee	Art Unit 1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 21-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 21-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Previous 103(a) rejection on claims 1-6, 8, 11-14, 21 and 22 over Kanda et al (EP'900) is hereby withdrawn: As argued by applicants, Kanda's ethylene glycol dimethacrylate (which is used in making Kanda's copolymer in his Example 2) has two unsaturated bonds, both of which are equivalent in terms of polymerization reactivity. Thus, since both of the unsaturated bonds would react at the time of polymer synthesis to be converted to saturated bonds, the resulting copolymer would not have a radical polymerizable group of present formula (A) or (C) (on the other hand, in present invention, in order to introduce a radical-polymerizable group, applicants use a compound including a plurality of ethylenically unsaturated groups having mutually different addition-polymerizing properties within a molecule (see for example, Synthesizing Process (5) on pg.41 of present specification)). Therefore, present invention which requires a polymer, which includes a repeating unit having a radical polymerizable group of formula (A) or (C) is distinguishable over that of Kanda.
2. Due to newly cited prior art, the following rejections are made non-final.

Claim Objections

3. Claim 3 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In claim 3, applicants recite that the binder polymer of claim 1 comprises at least the unit of formula (I) and *a unit having a radical polymerizable group and/or a unit having an amide group*. Since claim

Art Unit: 1752

1 already recites a repeating unit having a radical-polymerizable group of formula (A) or (C), present claim 3 fails to further limit claim 1.

The Examiner would like to suggest applicants to cancel claim 3 since new claim 23 also recites a repeating unit having an amide group.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

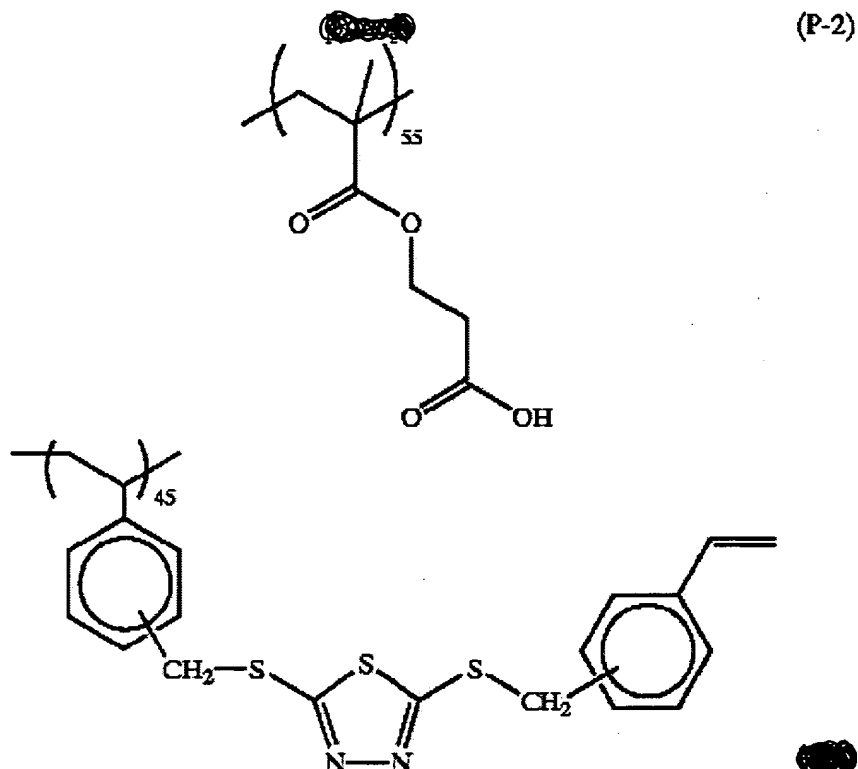
A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-14 and 21-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Furukawa (US 6,569,603 B2).

Furukawa teaches (see abstract) a light sensitive composition and a method of forming a relief image which comprises coating the light-sensitive composition on a support, exposing the composition by exposure and developing the same to form a relief image on the support.

Specifically, in his Example 8 (see Table 5), Furukawa teaches a light sensitive material 72, which contains Polymer P-2, a photoradical polymerization initiator, a sensitizing dye S-34. Furukawa's Polymer P-2 is shown below (see col.9):



As shown above, the first repeating unit teaches present Formula (I) (R₂ being an ethylene group), and the second repeating unit teaches present repeating unit having a radical-polymerizable group of formula (C) (present Z being a phenylene group). Therefore, Furukawa teaches present binder polymer. Furukawa's sensitizing dye S-34 is an infrared absorbing dye (see col.22, lines 46-53, col.23). Furukawa's composition also contains a polymerizable compound (pentaerythritol triacrylate) – see col.46, lines 20-30. Furukawa applies his light-sensitive material onto an aluminum plate and then exposes the plate using a semiconductor laser which emits at 830 nm (see Example 8). As his polymerization initiator, Furukawa teaches sulfonium salts or ammonium salts (see col.14, lines 1-24). Furukawa also teaches the use of polymerization inhibitors such as hydroquinones (see col.35, lines 35-51).

Therefore, Furukawa teaches present inventions of claims 1-6, 8-14, 21, 22 and 25 (it is the Examiner's position that since Furukawa teaches present composition of claim 1 and present precursor of claim 25, Furukawa would also inherently teach present invention of claim 5 and 25).

Furukawa also teaches (col.3, lines 62-67, col.4, lines 3-7) that in his polymer having a phenyl group substituted by a vinyl group, the vinyl group may be substituted by a group such as amide group; since there are only several substituent groups listed, one skilled in the art would immediately envisage the vinyl group substituted by an amide group. Therefore, Furukawa teaches present inventions of claims 23 and 24. Furukawa also teaches the use of a binder resin such as (meth)acrylic resins (see col.33, lines 36-42, col.34, lines 64-67, col.35, lines 1-10). Therefore, Furukawa teaches present invention of claim 7.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

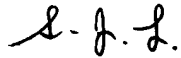
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

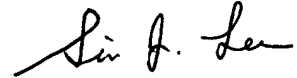
Art Unit: 1752

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



S. Lee
June 26, 2006



SIN LEE
PRIMARY EXAMINER